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DIVERSIFICATION, PROCESSING, MARKETING AND DISTRIBUTION, INCLUDING
TRANSPORTATION, WITH A VIEW TO IDENTIFICATION OF SPECIAL NEEDS
AND PROBLEMS OF THE LEAST DEVELOPED COUNTRIES

Study by the UNCTAD secretariat

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INTRODUCTION AND SUMMARY

1. The Committee on Commodities, in its agreed conclusions 25(XIII), requested, in view of the United Nations Conference on the Least Developed Countries to be held in September 1990, "a study to be prepared on diversification, processing, marketing and distribution, including transportation, with a view to identification of special needs and problems of the least developed countries, drawing on the results of the work of the Committee on diversification, processing, marketing and distribution, including transportation". This request must be seen against the findings of the Intergovernmental Group on the Least Developed Countries at its sixth session (1985), which stated, inter alia, that horizontal and vertical diversification of production and exports is of special importance for least developed countries.^{1/} At the Group's seventh session, the need for the least developed countries to diversify their economies and to reduce their dependence on one or two commodities was again stressed.^{2/}

2. In chapter I of this study the diversification experience of LDCs is discussed, in terms of the evolution of their dependence on commodities in their export earnings. In chapter II there is a discussion on the possible impact of specific factors on diversification and the identification of those factors which have hindered diversification into export-oriented commodity production in LDCs, including those on which remedial action would seem to be required.

3. A common characteristic of the least developed countries is their limited ability to develop linkages between their foreign-exchange-earning sector and the rest of their economy. This hampers diversification efforts. For all agents involved (governments, domestic entrepreneurs, foreign enterprises) the costs of setting up export activities are high, owing to an absence of domestic input suppliers, the lack of appropriately skilled labour (technical and managerial), the lack of repair services, and the poor state of infrastructure.

4. During the 1980s, these problems have been aggravated. Partly as a result of the constraints imposed by balance-of-payments difficulties and budgetary constraints, the productive capacity of most LDCs has deteriorated, as well as their infrastructure.^{3/} This has resulted in an increasing fragmentation of their economies. In these conditions, it is even more difficult than before to isolate new areas for diversification and investment.

5. In LDCs, vertical diversification (the processing of raw commodities) and diversification out of commodities (into manufacturing or services) commonly do not have the same income-multiplying effects that they have in the more advanced economies, owing to a lack of linkages in the national economy. All too often, a very large part of the foreign-exchange earnings from such activities leaves the country again to pay for inputs, labour, and technology and marketing know-how.

6. However, in order to break the vicious circle of underdevelopment and dependence, LDCs need to invest, especially in activities that make their economies less vulnerable to the instability in commodity export earnings. Generally they are dependent on only a few commodities, the prices of which are determined by the international market, over which they have limited influence. In addition, the level of production is often variable due to climatic conditions. In consequence, the LDCs experience large variations in

their foreign exchange earnings. Over half of the LDCs have suffered negative per capita economic growth during the 1980s. In almost all of these LDCs, negative growth coincided with, and was probably partly caused by, a decline in exports, mainly of their principal primary commodity exports such as coffee, cocoa, cotton, groundnuts and copra.

7. Most LDCs face a plethora of difficulties in diversifying their economies and especially their export sectors. Geographical factors and conditions constrain the diversification process in a large number of these countries. Over half of the LDCs are landlocked or island countries with competitive disadvantages due to isolation and high transport and energy costs. Adverse climatic conditions, such as vulnerability to drought or floods, have severely limited the diversification potential of at least 20 LDCs, among which are 17 African countries.

8. The identification of diversification opportunities is closely linked to the national resource base of a country. In this context, not all LDCs are disadvantaged.^{4/} In some 23 LDCs (among which 19 African countries) mineral deposits exist which could be exploited to reduce their dependence on agricultural exports. Until now, these possibilities have been used only to a very limited degree, partly because of a lack of expertise and financial resources. Fish resources are a valuable asset for at least six island LDCs and many coastal LDCs. It is remarkable that of the five LDCs with growing export proceeds (Bangladesh, Benin, Cape Verde, Maldives, Mauritania), in four the development of the fishing industry has played a large role. Overall, however, only a small proportion of the fishing potential is exploited, again owing to a lack of expertise and investment capacity among local agents, and problems in attracting foreign investors.

9. However, the diversification potential in three quarters of the LDCs is limited by their economic size - both in terms of the domestic market (fragmented with low purchasing power) and capacity to mobilize savings, including for the development of infrastructure and human resources. This means that diversification is dependent on the attraction of foreign investment for essentially export-oriented undertakings, in competition with other countries that have both a local market for part of the output and some capital resources to complement foreign inflows.

10. Foreign private enterprises are somewhat wary of investing in LDCs because of the general state of underdevelopment (low individual incomes, poor infrastructure, poorly developed regional markets, remoteness from main trade centres, a lack of intersectoral linkages causing supply and maintenance problems, and a lack of faith in the durability of recent favourable policy changes). Therefore, as already stressed by the Intergovernmental Group on the Least Developed Countries in the mid-term review of the Substantial New Programme of Action for the LDCs for the 1980s (SNPA), actions are needed to find ways of making LDCs more attractive to investors.^{5/}

11. The lack of development of labour force resources is a severe obstacle to the diversification process in LDCs, especially where entrepreneurial and management skills are absent. This structural weakness is less common in Asian countries (Bangladesh, Myanmar, Nepal) than it is in African or Pacific LDCs, or again in Haiti. Two broad categories of LDCs with labour force problems can be distinguished: those mainly in the Sahel and Equatorial Africa where there is a lack of skilled manpower at every level, and where the problem is likely to remain unresolved in the near future; and those, mainly

the more populated LDCs, where the importance of manufacturing has already resulted in a relatively well-trained labour force, while managerial and entrepreneurial skills still need to be developed.

12. Connected with the problem of the limited development of the domestic entrepreneurial sector is the lack of exposure of private entrepreneurs to export markets. This affects their ability to mount selling campaigns and their knowledge of market requirements for products, as well as the ability of foreign enterprises to evaluate them as potential partners.

13. The evaluation of diversification possibilities is directly affected by domestic policies. For example, pricing policies have acted as a disincentive to agricultural production in at least 21 LDCs (among which 16 African countries) for over 15 different agricultural products. Over-regulation of import-export trade has also hurt the diversification process. Poorly developed support services and a limited amount of research and development, compared both to developed and other developing countries, also reduce the competitiveness of LDCs. While many LDC Governments have been taking measures to address these problems, pursuant to the SNPA,^{6/} much more needs to be done. In particular, Governments would benefit from appropriate technical and financial support from, and exchanges of experience with, other countries.

14. External financial assistance given to LDCs has not always been accompanied by concrete measures to foster their diversification potential. Structural and sectoral adjustment programmes supported by the World Bank and other aid agencies have been implemented in 24 LDCs (among which 18 African countries) with priority placed on the rehabilitation of the existing exports in order to alleviate the economy's short-term problems. While exchange rate devaluations have helped to improve the competitiveness of some products, other measures have led to a credit squeeze on the sectors which show diversification promise.

15. These factors do not operate separately, but are strongly related, making the way out of the LDCs' present commodity dependence extremely difficult. For example, poverty has aggravated the effects of being landlocked or insular by preventing investment in infrastructure. The lack of technical skills and support services for export activities makes the functioning of domestic processing enterprises difficult, and also causes reluctance on the part of potential foreign investors.

16. To overcome this patchwork of problems, a concerted effort by the LDCs and the international community is necessary.

17. Governments of LDCs need to assess in which areas their countries have diversification opportunities. This should be based on up-to-date mineral and land use surveys, and then options should be considered in terms of the physical and economic constraints of the country. For island and landlocked LDCs, for instance, diversification into commodities or products with a relatively low volume/value ratio and with a modest demand for energy or imported inputs might be a good option. Governments should also try to identify local sectors which could form the base for export activities. Experience shows that it is often from exports as a supplement to domestic production that instances of viable diversification result. However, LDCs, when diversifying, should keep in mind trends in the world market for products under consideration. As essentially small partners in world trade, and price takers for most products, they are likely to suffer in situations of oversupply. In this connection increased consultations among producers would be a useful instrument.

18. Secondly, LDC Governments can stimulate diversification by creating an enabling environment. This means appropriate price and marketing policies, exchange rate policies, and investment policies. Moreover, in cases where the local private sector is not yet able to supply the necessary support services for export (well-organized marketing, market information, quality control, publicity), the government should step in to foster the development of such private sector potential, and complement these efforts through funding and co-ordination. The importance of the promotion of these types of services by governments was stressed in the SNPA.^{1/}

19. While recognizing that the final responsibility for diversification programmes lies with the LDC Governments, the role of the international community is a large one. Above all, all external assistance, whether from multilateral institutions or from bilateral sources, should lend support to LDCs' long-run development policies. In particular, structural adjustment programmes should be framed in such a way that achieving short-term stabilization objectives do not run counter to long-term development considerations; structural adjustment programmes should help to eliminate structural barriers, not reinforce them. The export structure of LDCs should be made stronger, defending the national economy from world market shocks, not making it more vulnerable to them, and in this respect structural adjustment programmes should have measures built into them to promote non-traditional exports. This could be achieved by supporting structural adjustment efforts with assistance on projects for production. Such assistance should include support in the identification of possible areas for diversification, the evaluation of these possibilities, especially in terms of world market conditions, the undertaking of feasibility studies, the realization of investment and the provision of complementary services. Projects with external assistance are also needed for creating an environment conducive to private investment, including the setting up of a whole complement of support structures (credit systems, marketing mechanisms, transport arrangements, communications networks, training facilities, etc.). Considering the present policies of international organizations and the situation of LDCs, the earmarking of funds specifically for diversification purposes might be useful. Diversification is essential to bring LDCs out of their vicious circle of poverty and dependence; but as a long-term goal it often loses out to more direct, politically more pressing needs. Without earmarked funds, the likelihood of LDCs actually finding and using resources for diversification is rather small.

Chapter I

DEPENDENCE ON COMMODITIES AND DIVERSIFICATION IN LEAST DEVELOPED COUNTRIES: MEASURES AND TYPOLOGIES

A. Methodology

20. The changes in commodity dependence in LDCs have been examined for the 1967-1987 period.^{8/} This permits an analysis of the changes in the dependence of countries on commodities for their export earnings. Consistent data to compare the development of commodity dependence for exports with the commodity dependence of the whole national economy (or to put it another way, the vulnerability of the economy to changes in the commodity sector, or changes in the conditions for one or two main commodities) are not available. However, it should be noted that a growing dependence on a few commodities for export earnings does not always reflect a growing dependence of the economy on these commodities. The export package of a country is not necessarily a full copy of its national production.^{9/}

21. Several criteria are used to assess the diversification experience of individual LDCs. The first measure classifies the countries into groups according to changes in their dependence on commodities for export earnings and the changes in the relative importance of their two major commodities. Individual countries are classified within these two groups of criteria according to the direction of change (see table 1). The threshold level considered to indicate a significant change is 10 per cent. This approach, logically, measures only relative developments. To show the underlying real developments, the countries are classified according to real growth figures: the growth of their manufacturing exports and their commodity exports; and the growth, in volume terms, of the export of their two main commodities as compared to the growth in export of other commodities. Finally, some other measures of concentration within the commodity export sector are shown: change in the range of commodities being exported, developments in the concentration of these commodity exports, and the share of the two main exported commodities in total commodity exports at the end of the period under consideration.

22. The experiences of LDCs have been reviewed to the extent that data were available; unfortunately, for four countries (Bhutan, Botswana, Democratic Yemen^{10/} and Djibouti) information was lacking, so the number of countries actually reviewed is thirty-eight.

B. Commodity export dependence

23. In 1987, LDCs were still strongly dependent on the export of commodities for most of their foreign-exchange earnings. Thirteen were dependent on commodities for over 80 per cent of their export earnings; 17 for between 50 and 80 per cent. Five countries were dependent on only two commodities for over 80 per cent of their export earnings, and sixteen for 50 per cent to 80 per cent.

24. As is shown in table 1, the record of the least developed countries with respect to diversification is not a favourable one. From the late 1970s to the mid 1980s, only 14 out of 38 countries became less dependent on commodities for their export earnings. Thirteen became less dependent on their two main export commodities. The other countries showed either an unchanged or an increased commodity dependence.

25. Table 1 still gives a somewhat optimistic picture. As clearly appears from tables 2 and 3, in some cases the observed reduction in dependence either on commodity exports or on the two main export products is mainly the result of a collapse in commodity production. In a more positive sense, however, the reduced dependence can be the result of an increase of the productive base. Here, several cases can be discerned:

- horizontal diversification in commodities, i.e. the broadening of the range of exported commodities, with a reduction of the importance of the main export commodities;
- vertical diversification, i.e. the pre-export processing of commodities;
- growth out of the commodity sector, into the production of manufactures.

26. Horizontal diversification, in the sense of a broadening of the range of exported commodities, did indeed take place. As is shown in table 4, in two thirds of the LDCs the range of exported commodities increased from 1970 to 1985, and in half the concentration of commodity exports decreased. However, the share of the two main exported commodities in total commodity exports in 1987 clearly shows that these improvements have been very marginal. Although the broadening of the range of exported commodities can be interpreted as showing at least a potential for diversification of commodity exports, most of these countries continue to rely on only two commodities for the major part of their commodity export earnings.

27. Horizontal diversification, in the sense of a larger role for formerly minor export products, has also not been a large success. Table 3 shows that in over half of the LDCs the export of secondary export commodities decreased in volume terms from the early 1970s to the mid-1980s. In most countries in this group, the exports of the one (in most cases) or two main export commodities increased during the same period; for instance in the United Republic of Tanzania, the part of coffee and cotton in total exports increased from 30 to 47 per cent, while the share of other commodities in exports stagnated. In quite a few (seven) not only did the export of secondary commodities fall, but so also did primary commodity exports, indicating a total decline of commodity exports. This paints a rather bleak picture of the diversification of the export-oriented commodity sector as experienced by the least developed countries.

28. The picture becomes even bleaker if one realizes that in all countries where the volume of exports of secondary commodities did grow, with only three exceptions (Bangladesh, Malawi and Nepal) this growth coincided with a decline of the exports of the main export commodities. In many cases the new products quickly became very important, with the result that these countries continue to obtain the larger part of their export earnings from only two commodities - albeit different ones than before.

29. In fact, changes in the combination of exported commodities were quite common in the period under review. From 1970 to 1987, in over two thirds of all LDCs, the two major export commodities at the beginning of the period were not the same as the those at the end of the period (see table 5). In some cases, the main exported commodity changed from one agricultural product to another: in Burkina Faso cotton took the place of live animals. In others, agricultural products were replaced by minerals: in Niger, uranium took over from livestock exports; in Guinea and Togo respectively bauxite and phosphates replaced tropical crops. In some countries, minerals were replaced by agricultural exports: Lao People's Democratic Republic and Rwanda. In

Sierra Leone, the role of diamonds and iron and steel had declined until the early 1980s in favour of coffee and cocoa, but now the main export products are again two minerals, rutile and diamonds. In Kiribati, phosphates were first replaced by the export of copra, which was then replaced by fish products. In Mauritania, fisheries took over from iron ore.

30. Vertical diversification, whereby commodities are partly processed before export, took place in at least seven LDCs (see table 6). On the other hand, during the period under review exports of commodities in processed form stagnated or even decreased in several countries (Mali, Somalia, Chad, The Gambia, United Republic of Tanzania), whereas the exports of the corresponding commodities in raw form increased. For instance in Mali, the ratio of raw cotton exports to the exports of cotton fabrics was 6:1 in 1970, and had increased to 20:1 in 1983. In Chad, the exports of live animals increased fortyfold (in value terms) between 1967 and 1983, whereas the exports of hides and skins, and of meat, remained more or less stable. In Niger and Benin, the intensified exploitation of mineral resources (respectively uranium and petroleum) was on a par with a reduced exports of agricultural commodities, in raw and processed form.

31. Diversification into manufacturing, and in some cases into services, has taken place in a number of countries. According to table 1, fourteen countries became less dependent on commodities for their export earnings. In these countries the change has indeed been a large one. Their share of commodities in foreign-exchange earnings decreased by 36 per cent on average (non-weighted) between 1967 and the early 1980s. Eleven out of 14 countries reached this result starting from a very difficult position, with a commodity dependence of over 80 per cent. Of these 14 countries, 8 show a real and significant growth of their manufactured exports (see table 2). One other, Lao People's Democratic Republic, shows a reduced commodity dependence thanks to the development of hydro-energy exports. In some cases this manufacturing activity is closely linked to the rest of the economy, using, among other inputs, local commodities to produce manufactured goods (which is a further phase in the processing mentioned above as vertical diversification). In other cases manufacturing takes place in an export processing zone, without many linkages with the rest of the economy.

32. The range of products varies from traditional low-technology products such as leather products (Bangladesh, Benin, Lesotho, Nepal) or clothing (Bangladesh, Lesotho, Malawi, Nepal), to products at a higher technological state such as chemical products (Burkina Faso), construction and mining machinery (Chad, Yemen), aircraft engines (Lao People's Democratic Republic) or motor vehicles (Yemen). It is remarkable that most countries which have seen a growth especially of their non-domestically-linked manufacturing sector show a real - and not just a relative - decline in their commodity exports: such is the case in Benin, Haiti, Nepal and Yemen.

33. In many cases the development of the manufacturing sector is the direct consequence of government policies to diversify exports, either by the promotion of light industry (e.g. in Lesotho), by the establishment of an "enclave" manufacturing zone (e.g. in Haiti, Benin or the Maldives), or by both (e.g. in Nepal and Bangladesh). It should be noted that stimulating manufactured exports does not necessarily reduce commodity dependence in exports. Only half of the countries which have developed some export-oriented manufacturing industries have managed to decrease their dependence on commodities; in others this did not happen because the export-oriented manufacturing, although stimulated, did not fare very well (Cape Verde, Guinea, Mozambique and Somalia), or because commodity exports grew relatively faster (Comoros, Mali).

34. An earlier attempt to relate the pattern of commodity dependence or diversification of 86 developing countries to selected economic indicators has shown few definite links between the diversification experience and economic conditions of those countries.^{11/} A similar approach has been tried for the 38 LDCs now examined, through a cross tabulation in table 1 of commodity dependence with indicators of size and economic status (see table 7).

No significant relationships between the pattern of dependency or the diversification experience of LDCs and indicators such as population, geographical size, income level, economic growth, investment growth, export performance can be discerned from this exercise.

C. Conclusion

35. It is clear that there are two groups of countries with regard to export diversification: those with decreasing commodity dependence, where very few African countries can be found, and the majority where no significant change in commodity dependence has taken place. However, from the analysis above no special characteristics distinguishing the countries in these two groups can be inferred.

36. It is therefore useful to look at the matter from another angle: that of examining the factors inhibiting or promoting diversification, and of analysing the impact of these factors on the diversification process. From such analysis, a clearer understanding of the factors important for diversification can result, and some indication can be given on the areas where changes in policies and actions could be envisaged to tackle the special needs or problems. This is the approach which will be followed in the next chapter.

Chapter II

IDENTIFICATION OF FACTORS AND CONDITIONS INFLUENCING THE VIABILITY OF DIVERSIFICATION IN LEAST DEVELOPED COUNTRIES

37. The possibilities to diversify production - be it externally or internally oriented - are severely limited in LDCs. In fact, the conditions are often such that, in the existing world market situation of slow growth in demand and increased competitiveness among suppliers, an LDC often has a short-term comparative advantage primarily in its traditional export products; its comparative advantages in non-traditional and processed products are less obvious. However, considering the resulting dependence on only a few products, and the beneficial long-term effects of learning how to produce and export new products, countries cannot afford to confine themselves to using only their comparative advantages in traditional exports. This view is widely accepted, and has on several occasions been espoused by the international community.^{12/}

38. The limits which confront an LDC when trying to diversify its production structure relate to several sets of factors:

- its natural conditions: the natural resource base, geophysical characteristics, climate;
- its poverty - both as a result of, and resulting in, poor infrastructure, a lack of professional and managerial skills, a lack of local purchasing power, and insufficient domestic investment resources;
- the conditions imposed by the world market: the volatility of world market commodity prices, market access barriers, market information problems and a limited access to foreign investment resources.

While these factors affect all economic activities in LDCs, they have a particularly discouraging effect on possibilities for diversification. In table 8, an illustration is given of production possibilities in LDCs that are affected by these limiting factors.

A. Domestic factors and conditions pertinent to the question of viable diversification

39. LDCs can promote the diversification of their production structure by appropriate domestic policies. They can thereby create favourable conditions for the exploitation of their physical, human and financial resources. However, the scope for viable policies is severely limited by the conditions which a country faces.

40. Domestic constraints can be of three kinds, generally: physical (determined by the geophysical and climatic conditions in a country), socio-economical (determined by the limited size and limited level of development of a country), and political (the political stability of the country, the political concepts and ideologies in force).

41. Geophysical and climatic characteristics of LDCs, as well as their endowment in natural resources, are important determinants of their capacity to diversify. The main problems can be classified as following:

- an unfavourable topography, landlockedness, or a widely dispersed territory (island States): these result, inter alia, in high transport costs;

- an unfavourable climate: the common occurrence of droughts, hurricanes and the like, which destroy production and affect the viability of diversification opportunities;
- unfavourable natural resource endowments: a small potential to develop agricultural, mineral or other resources.

42. On the other hand, the geophysical and climatic characteristics of LDCs might be such that they have a comparative advantage in the development of certain resources, for example minerals, tourism or hydro-electric power. Unfortunately, whereas mineral deposits are present in most LDCs, they are only rarely easily exploitable, often being in areas with little or no infrastructure. Although in some countries (for instance, the Maldives) the large resources offered by tourism have been partly tapped, in others which possess a large tourist potential, this potential has hardly been used. Many LDCs have significant hydro-electric potential: for some (Lao People's Democratic Republic, Mozambique) its export has already become an important foreign-exchange earner, and in several others comparable opportunities exist. ^{13/}

43. Socio-economic constraints consist of such elements as the limited size of the internal market of most countries, a generally low level of education and training of the population, and a lack of budgetary means to invest in the improvement of human resources and infrastructure.

1. Climatic circumstances hindering diversification

44. The climatic situation in most of the LDCs is distinctly unfavourable to economic development. Most countries where droughts are frequent and severe are LDCs. Apart from that, individual LDCs have to cope with occasional serious floods, hurricanes, earthquakes, locust invasions or other comparable natural disasters. ^{14/} In most LDCs, agricultural output depends more on climatic conditions than on government policy.

45. Unfavourable climatic conditions influence the diversification process in a country in at least four ways:

- An unfavourable climate increases the maintenance costs and reduces the lifespan of equipment used, and, indirectly, increases the costs of many other production inputs, thereby making products less competitive;

- When climatic problems are recurrent, farmers, being reluctant to take risks, shift resources from cash crops to subsistence crops. They do not wish to become dependent on the market, even if, in most years, a specialization in cash crops (industrial crops or export crops) would be profitable for them. Moreover, they are adverse to risking scarce resources on a new crop that can fail if rains are sparse, late or too heavy;

- In the case of recurrent droughts, endangering the food supply of the cities, governments are induced to give priority to the development of a guaranteed staple crop production. In the past, for instance, scarce government resources were being diverted into expensive irrigated rice schemes, to the detriment of the development of rain-fed cereals and export crops. Although it is now agreed that measures to promote small-scale investment by farmers are far more effective than large-scale irrigation schemes, governments still incur high costs in keeping these large-scale schemes operative, thus effectively reducing the funds available for diversification efforts;

- Climatic occurrences can destroy crops, livestock and production facilities. Droughts in the Sahel have destroyed crops and livestock and reduced river basin fish catches, thus reducing exports. In Vanuatu, cyclones

have destroyed not only crops, but also agro-industrial facilities. In Bangladesh, floods have frequently resulted in supply problems for export-oriented agro-industries.

2. Natural resources availability and diversification

46. The potential of LDCs to diversify is very limited when they do not have any natural resources to develop. In fact, some LDCs have already been hit by a depletion of their mineral resources (bauxite in Haiti, manganese in Vanuatu, phosphates in Kiribati). Fortunately, for most LDCs this is not the case. Although some LDCs have a very limited land base (most island countries, and some landlocked countries like Malawi and Rwanda), most still have unused or under-utilized agricultural land. Apart from that, many LDCs which now depend mainly on agricultural exports have considerable potential for the exploitation of minerals. Governments recognize this, and work towards the realization of their country's potential. In many countries, feasibility studies are undertaken, often in co-operation with international agencies, foreign governments or private enterprises. Many countries also take measures to promote mineral development by more appropriate investment laws. In Niger, the government is trying to develop non-uranium mineral exports. In Burkina Faso, the export of gold has increased considerably in recent years thanks to government support, in combination with direct investment by a transnational corporation and an Arab aid agency. Ethiopia, Guinea, Sudan, Mali and the Central African Republic are also trying to diversify their exports through the strengthened exploration and exploitation of minerals.

47. However, in most countries the potential to exploit minerals has hardly been tapped until now. Partly this is due to vague policies regarding property rights over minerals, discouraging small and medium-sized artisanal mining enterprises. In Latin America, for example, such firms abound, whereas in most African LDCs they are virtually absent (small and medium-sized artisanal firms have the added benefit that most of the proceeds are not repatriated abroad, but remain within the country; for governments, however, a disadvantage might be that they are more difficult to tax). Partly, especially if considerable investments are involved, the lack of mineral exploitation is also due to a lack of interest on the part of foreign investors. In Africa during the past 15 years there has been no significant foreign investment in mining except in Botswana. Mining companies have held back on investments in Africa - in LDCs and non-LDCs - because of comparative natural and infrastructural disadvantages compared to sites in Asia and Latin America, unfavourable government policies and an unstable economic environment, while existing productive facilities have deteriorated for to a lack of financial resources, a shortage of technical skills, and constant political interference in management. To indicate the mining companies' limited faith in Africa: of the sales income from African production, they spent only about 2 per cent on exploration, whereas worldwide they spent about 5 per cent.

48. Apart from possibilities in the mineral and the agricultural sector, many LDCs also possess a great potential in the fisheries sector, both in ocean and continental waters and in inland waters. In most countries, the fishing industry is essentially based on the informal sector. Both this mode of exploitation and modern industrial fishing have to be promoted; this last mode especially by joint ventures with foreign fleets, to obtain the needed capital and technical and marketing know how. Mauritania has already partly used its potential: after a fast expansion since the late 1970s, fishing has become its

largest foreign-exchange earner. However, the benefits Mauritania derives from this activity are still limited, as 80 per cent of its gross foreign-exchange earnings have to be paid out for foreign factor costs, both labour and capital, because of the lack of local skilled labour and expertise. In Somalia, fishing exports have steadily expanded since the early 1980s, and the potential for further expansion remains large. In most other countries, the exploitation of fish resources has stagnated. As with minerals, the full utilization of these resources has been inhibited by the inability to secure the necessary investment and technical expertise. However, some caution is necessary. In African waters, for example, there is already a grave danger of over-fishing for several high-value species. The development of exploitation plans and more intensive regional co-operation to maintain control over actual fishing practices are required.

3. Transport problems as a barrier to viable diversification

49. A large number of LDCs have transport problems. Both their internal and external transport rates are very high. High costs for international travel result from long distances on bad roads or unreliable unmaintained railways; from low national demand, resulting in high unit costs of transport; and from imbalanced trade flows (imports by far exceeding exports, which leaves transporters without a return freight). High internal transport costs are also the result of poorly maintained roads, high prices for petroleum, tyres and spares, and a low demand. Some LDCs are even further disadvantaged by their difficult terrain: Nepal, Lesotho and Rwanda, for instance, have high internal transport costs because of their mountainous landscape. Here, as in other LDCs, diversification-oriented projects often include components to improve local road infrastructure, specifically for improving rural feeder roads. The internal transport costs are also very high in island countries like Kiribati, Tuvalu and Vanuatu, where geographical distances between the islands are very large. In these island countries, the production of export crops often suffers from transport problems: the unit value of the main export products (coconut products and coffee) is quite low, and small changes in transport costs can alter their profit/loss situation dramatically. Moreover, delays in transport, which compromise the quality of perishable export products, are not uncommon in most island countries.

50. Exports are particularly difficult to develop for landlocked countries. Among the 27 landlocked developing countries, 15 are LDCs (11 of them are to be found in Africa). Landlockedness imposes problems both of high costs (high costs of intermediary imported inputs, especially petroleum products, and high expenses to get the products to the nearest port) and of organizational problems with the evacuation of products (a serious problem as most agricultural export products are perishable), rendering both commodity exports and manufactured exports less competitive. Excessive government regulation, resulting, *inter alia*, in large delays during transport, increases transport costs even further. In the interior Sahelian States (Mali, Burkina Faso, Niger, Chad) the costs of exporting occasional cereals surpluses to other countries - even surrounding countries - are almost prohibitively high, inhibiting regional trade. In Uganda, the vulnerability of export activities was felt when the border with Kenya was closed for two weeks; coffee exports had to be diverted through the United Republic of Tanzania, which entailed a considerable increase of the already high transport costs. Nepal found itself in a comparable situation when India decided to close its borders early 1989 to mid-1990. Such temporary close-downs of border crossings not only hurt exports directly, but also diminish the importers' confidence in the LDC exporters, which could take a long time to build up again. Rising transport

costs for tin have made its exploitation in Rwanda less viable. Malawi shipped most of its exports through Mozambique in the early 1980s; terrorist activity in Mozambique, however, had resulted in a diversion of most of Malawi's exports through South African ports by the mid-1980s, vastly increasing the costs of exports and making some, like sugar, non-competitive. Mozambique suffered as well: before South Africa succeeded in diverting the traffic in the subregion to its own ports, provision of transport services was Mozambique's main foreign-exchange earner.

51. In most LDCs poor infrastructure (road infrastructure, communication infrastructure, storage facilities, and public services like water and electricity supply) hinders diversification. Poor infrastructure results in high additional costs for companies (many have to use their scarce resources to secure electricity and water supply, and transport costs are high), and in reduced incentives for market-oriented agricultural production (because markets are difficult to reach for farmers and traders). The crippling external debt problems of most LDCs have resulted in a further deterioration of infrastructure - countries are no longer able to set aside adequate resources or to raise external loans to maintain basic infrastructure, thus reducing prospects for expanded investment.

52. While in many countries interesting prospects exist for fruits and vegetable exports, poor transport and storage facilities (both internally, for the supply of towns, and towards external markets) inhibit its development (for example in Bangladesh, Mali and Burkina Faso). The same problems hamper an expansion of the export of prawns and fish from Bangladesh. In several countries, an improvement of seaport facilities might be the key to an improvement of exports.

53. Other infrastructural problems as well have had repercussions for export diversification. One often overlooked factor is the importance of the communications network. In general, once a country starts to develop non-traditional exports, it needs good international communication links. For many products (like flowers, vegetables, fruits, essential oils) a direct link with the consumer market is necessary, in order to react fast and appropriately to market developments. Such links are absent in most LDCs.

54. Electricity and water supply, as well as storage and port services, also play a role. In general, power failures and intermittent power supply have hindered production in processing industries. In the United Republic of Tanzania, an increased production of cotton resulted in congestion of storage and transport facilities, making the export of part of the crop impossible.

55. Investment in infrastructure is very expensive, and governments often have problems in meeting the recurrent costs; in certain cases, it might be preferable for governments, in promoting their exports, to concentrate their policy initiatives on products for which transport and other infrastructural bottlenecks play a smaller role (as, for instance, in Nepal, where the Government encourages investment in high-value woollen carpets and garments).

4. The impact of limited effective demand

56. The effective demand in most LDCs is rather low. Their domestic markets are small and spatially fragmented, and external markets are often difficult to reach; these problems are even more pronounced in small island economies. In these circumstances, it is difficult to develop a manufacturing sector. Of the 38 LDCs surveyed here, nine have a manufacturing sector which produces

less than 5 per cent of GDP; in 18 the manufacturing sector produces between 5 and 10 per cent of GDP. In all least developed countries the contribution of agriculture to domestic production is far larger than that of manufacturing.

57. In spite of the limited local market, enterprises in most countries have not reacted by orienting their manufacturing production to exports: in three out of four cases, the part of manufacturing production in GDP is larger than the part of manufactured products in total exports. When the local market is too small, and when there are problems in gaining access to external markets for processed commodities or manufactured products, countries often opt for diversification not into manufacturing, but into non-traditional commodities for export to regional and international markets. Tanzanian traders, for instance, sell fish in Zaire. Shrimps from Mozambique are sold to hotels in Swaziland. In Niger, the export of french beans has boomed as a result of Nigerian demand. Burkina Faso and Ethiopia expanded the export of green beans to the European market. Others also try to develop this option.

58. The absence of a large local market or viable export perspectives makes most LDCs quite unattractive for foreign investment in the processing of commodities or in manufacturing. But the lack of foreign investment funds plays a role not only in these activities: such funds are also often difficult to find for mineral exploitation, fisheries development or investments in services (see table 7).

5. Manpower constraints for viable diversification

59. In most LDCs, shortages of skilled labour, managerial capacities and technical expertise are a serious barrier for viable diversification. These problems are generally more acute and severe in LDCs than in other developing countries.

60. In particular, local entrepreneurship is hardly to be found in a number of LDCs. In the past, many governments have shown little or no confidence in the local private sector, and have considerably restricted its activities. Import and export trade for many products was often a government monopoly, as a result of which traders have not been able to build up any experience in foreign trade. In the local economy, the government often kept many activities under its own control, by way of parastatals, whereas other activities (mineral exploitation, plantations) were often the exclusive domain of foreign private enterprises, again hindering the building up of any private-sector know-how. Finally, in many countries the protection of the local market has shielded domestic entrepreneurs from foreign competition, as a result of which they had little incentive to improve their production or marketing techniques.

61. Human resource problems strongly hinder not only the development of primary processing, but also of other production efforts. Diversification implies normally that producers (farmers, labourers, fishermen) and intermediaries have to learn new skills, which is quite difficult if the level of general education is low, as it is in most LDCs. Mauritania loses the larger part of its gross receipts from fishery exports because its local fishermen do not have the skills to do the necessary work - most fishing is therefore done by foreigners. In Bangladesh, agro-industrial industries have difficulty in finding the necessary skilled labour. In the mineral sector also development is often only possible with foreign manpower: as in Lao People's Democratic Republic, Nepal and Niger.

6. Political instability as a barrier to diversification

62. In several countries political instability has hampered diversification efforts. In Afghanistan, about 55 per cent to 70 per cent of the country's pre-1978 agricultural capacity was lost during the 1980s; only natural gas exports to the USSR increased, whereas the exports of other products (fruits, nuts, carpets, skins, wool) decreased. In Chad, the civil war disrupted the exports of livestock, cotton and gum arabic. Sudan and Ethiopia are hardly attractive to foreign investors because of their internal disturbances. In Haiti, foreign investors in the export processing zone reacted to political and labour unrest by transferring their facilities to other countries. In Uganda and Mozambique, export capacities are but a shadow of the mid-1970s capacities. In several African countries the number of refugees present on their territories puts a heavy burden on the government budget.

B. The role of domestic policies

63. Although the possibilities of LDCs are limited by their difficult situation, their governments are able to influence diversification efforts by appropriate policies. Poorly formulated policies, on the other hand, can hinder diversification efforts. Government efforts in three domains are particularly important: producer prices and marketing policy, support services, and investment promotion activities.

1. Price and marketing policies

64. In many LDCs, inappropriate producer price policies and excessive government control on marketing stand out as important obstacles to agricultural diversification (see table 8). Producer prices are often low, compared to world market prices, owing to overvalued currency exchange rates, high export taxes (export taxes are often an important part of government income), and a monopolization of exports by inefficient state marketing boards. As farmers are responsive to price incentives, this has depressed production. The net effect on diversification is not clear: export taxes are often highest for the main export products, and it might also be that only the main export crops are effectively controlled by the government (in fact, in many countries an official purchasing monopoly and official prices exist only for these main export crops); farmers possibly react by shifting to non-dominant crops - at least, if for those crops an outlet is assured. However, overall growth and the possibilities for viable diversification suffer.

65. Since the early 1980s, however, substantial changes in price and marketing policies of LDCs have taken place, resulting in improved incentives for local producers. The beneficial effects of these changes on agricultural exports can be observed in several countries: cotton and maize in Burkina Faso, tea and coffee in Burundi, foodcrops in the Central African Republic, rice in Guinea, cereals in Malawi, foodgrains in Nepal, coffee in Rwanda, copra and taro in Samoa, coarse grains and sesame in Sudan, cotton in Togo, and cocoa in Ethiopia, Malawi, Togo, Uganda and Vanuatu. Although these changes have benefited the economies of these countries, in several cases (Burundi, Rwanda, Samoa) they have also exacerbated the dependency of the country on its main export products: improved producer prices have often proved to be an incentive firstly to rehabilitate traditional export crops, the production of which was artificially depressed in the past.

66. If a currency is devaluated, it is possible to give farmers and other producers more local currency for their product. Moreover, the incentive to smuggle is reduced, and the local currency becomes more 'useful' because more consumer goods are available on the markets (in several countries, such as Guinea-Bissau or the United Republic of Tanzania, the fact that almost nothing could be bought on rural markets, even for those with money, strongly depressed agricultural production in the past). Currency devaluation has stimulated agricultural exports in several countries: that of cashew nuts in Guinea-Bissau, several products in the United Republic of Tanzania. In the cases of Equatorial Guinea and Guinea, the adoption of a convertible currency has greatly improved exports. Since Equatorial Guinea entered the Franc Zone in 1985, its exports of timber have increased significantly, and its potential for fisheries exports is likely to be tapped. In Guinea, which introduced weekly currency auctions in 1986, the potential for larger manufactured exports is now present.

67. Government control of marketing often has negative effects on export performance, both because of high marketing margins and non incentive policies (such as late payment of farmers). Many LDCs still retain a government monopoly on export crops, although several (Guinea, Guinea Bissau, Malawi, Mali, Myanmar, Niger and Somalia) have recently liberalized their policies. On the other hand, the government can play a useful role in supplying services which the private sector cannot as yet supply (quality control and grading, market information), and in stimulating a market for non-traditional products - an assured outlet is often as important as good prices. The strong growth of cotton production in Burkina Faso and Mali, from non dominant to dominant export product, was, for instance, mainly the result of the existence of a good extension and marketing network. For new products like exportable vegetables, fruits, or cut flowers, investors (farmers) might need the assurance which a government sponsored programme can supply.

68. An artificially high producer price for export products probably stimulates production, but it cannot be sustained in the long run by the governments of LDCs. If producer prices are artificially high, governments either have to subsidize exports - which is possible if funds are available in a price stabilization fund - or they have to try to sell their products at a price higher than the world market price. The latter course is generally not possible. In the case of the Comoros, for instance, government imposed high producer prices meant that traders were unable to sell a large part of their vanilla on the world market in 1987, in the face of increased foreign competition.

69. In most cases, therefore, the level of local compared with world market prices has to be such that incentive producer prices are sustainable. World market prices, however, fluctuate. When they fall, the exports of dominant and non dominant products are negatively affected, thus hindering diversification. The export of tea is discouraged in Bangladesh, Burundi, Malawi and Mozambique; the export of coffee in Equatorial Guinea, Guinea, Lao People's Democratic Republic, Sierra Leone, Togo and Yemen; the export of ylang-ylang in the Comoros; the exports of groundnuts and sorghum in Sudan; the exports of minerals in Mauritania, Rwanda and Sierra Leone. In Lesotho, the only diamond mine closed down in 1982 after a fall in world market prices. In Vanuatu, the local fishing company was forced to close down in 1986 following a fall in tuna prices - causing the country to lose a quarter of its export proceeds.

70. Apart from the sustainability of producer prices for export crops, countries also have to consider the relative prices of export versus local food crops. Many LDCs, especially in Africa, are net food importers, and they cannot permit export crops to crowd out food crops. In most countries, therefore, government and foreign donors alike follow a two-tier strategy, stimulating both food crops and export crops. To ensure domestic supply, several countries have also installed cumbersome procedures for the export of commodities like cereals and meat - of which in some years there is a surplus, in some years a shortage - thus hindering exports even in surplus years.

2. The supply of support services

71. To promote diversification, as with economic growth in general, certain support services are necessary. Some of these can be supplied by the public sector, others are more efficiently supplied by private enterprises (but then the government has to create the right conditions for their functioning).

72. Such services include research and development, to sustain the existing productive activities and to develop new ones; input supply; extension services; fertilizer supply; accessible credit facilities; information, including about market conditions or changes in government policies; general infrastructure; and specific marketing services. Apart from this, much also needs to be done to improve the repair services for industrial equipment, and the access to spare parts and inputs (in many countries maintenance problems result from foreign exchange shortages, which, with foreign support, can be easily resolved). A poor level of support services is one of the main reasons for an often very low capacity utilization rate of industries in LDCs: in the mid-1980s, for instance, it was only 33 per cent in Sudan's private sector, and 25 per cent in the United Republic of Tanzania.

73. Marketing services are important for LDCs: once a country starts to develop non-traditional products, marketing know how becomes essential. A country often needs to penetrate new markets, interact with new partners, use marketing mechanisms that were not needed before, and seek access to new information sources. The marketing knowledge built up for traditional products might no longer be applicable. Another important facet is packaging: as processing and converting industries develop, more of the resulting products will require the improved image which packaging provides. Trade information (including information about inputs), market surveys, export credit, packaging and quality control are among the various marketing services often poorly developed in LDCs.

74. Poor quality control inhibits the development of cotton and livestock exports in Ethiopia, and exports of small livestock in Haiti. East African exporters of livestock and meat, all of which, except Kenya, are LDCs (Somalia, Sudan, Ethiopia, Uganda and United Republic of Tanzania), have seen their market share in the Near East deteriorate from one half in the early 1970s to a mere 3 per cent in the early 1980s, mainly owing to problems with quality control and poor marketing. This market could be partly regained if East African exporters could meet the quality and quantity demands of the importers, arrange timely and regular delivery, improve product image, and sell at competitive prices, all of which are feasible if exporters co-operate closely. Regional co-operation to install quality standards would also enhance the export potential for horticultural products from West-African LDCs. Poor packaging and marketing techniques hinder the development of tea exports in Bangladesh and several African countries.

3. Investment promotion

75. Diversification, both into non-traditional primary products and into processed commodities, necessitates investments. LDCs commonly only have a limited potential to mobilize local savings. They had a gross domestic savings ratio of only 5 per cent, on average, in 1985, compared to an average ratio of 23 per cent in all developing countries. So there are no prospects in the foreseeable future for domestic capital mobilization from within the LDC countries which would meet their capital needs for diversification. Small projects can still be financed from within, of course. However, apart from some possibilities in agriculture, most projects are likely to be too expensive. In mining, for instance, the exploitation of new resources commonly requires an investment of over \$ 100 million, too much for most LDCs. Even minerals exploration is prohibitively expensive. In most cases, therefore, in order to obtain the necessary investment funds, LDCs have to obtain foreign funding. They can either borrow money in the international capital market (which has become very difficult in recent years), obtain foreign aid, or attract private foreign investors.

76. LDCs do try to stimulate investments by local enterprises. In virtually all countries, measures have been taken to stimulate especially small and medium-sized enterprises. Encouraging local entrepreneurial talents and capacities is essential for LDCs, not only to stimulate self-reliant development, but also to attract foreign investment. Nowadays, many transnationals and smaller firms from industrialized and other developing countries favour joint venture arrangements rather than wholly-owned enterprises, which necessitates the presence of local partners (be it private or public).

77. Many LDCs, faced with the necessity of promoting investment to enhance their diversification efforts, have created new legal or regulatory conditions to attract foreign enterprises. Globally, foreign investors can have two reasons to invest: production for the export market, or production for the local market. In LDCs, the latter is usually unattractive in view of the low effective demand, which has even become more depressed in recent years. For most products, foreign enterprises are completely unwilling to invest in domestically oriented industries without some tariff protection in the initial years of operation. In the past this was possible: the United Republic of Tanzania, for instance, was able to attract reasonably large foreign investment in the 1960s and 1970s to finance its import-substituting industrialization - with minimal economic success. Nowadays such protection is incompatible with the import liberalization which is part of structural adjustment programmes. So, in the present economic circumstances, it remains feasible only to attract foreign investment for export-oriented undertakings.

78. Foreign investment can be attracted by good general conditions - reliable electricity supply, communication and other public services; a good transport infrastructure; a well-trained local workforce; and political, legal and economical stability. In addition, governments can give direct incentives such as more liberal investment codes, the installation of export processing zones, duty-free imports, tax-holidays, and specific legal measures, guaranteeing, for instance, repatriation of capital. In some cases, there are special incentives for enterprises that install themselves in rural areas to process local inputs for exports, or for enterprises that develop the export of non-traditional commodities. Ethiopia, Guinea, Mozambique, Afghanistan, Lao People's Democratic Republic and Myanmar, previously all closed to foreign capital, have recently opened their economies to foreign investment; in Nepal

and Samoa, foreign enterprises are now allowed to get full ownership over enterprises; in Lesotho, the tax holiday offered to investors was recently increased from 6 to 10-15 years, in order to remain competitive with South Africa; in the Maldives, the Government has installed a export processing zone, supplied with a port, an airport and electricity; in Togo, the Government decided early in 1989 to install two such zones. In other countries as well, measures have been taken to make foreign investment more attractive. The role of the government is essential in all these cases. As has already been mentioned, the savings rate is very low in most LDCs, so domestic private-sector participation in large investment projects necessarily is limited. Transnationals wish to see either some local participation - which, considering the high amounts often involved, often has to be by the government or by state enterprises - or government guarantees, to reduce their investment risk.

79. In several cases, government measures have indeed met with success. In Mozambique, for instance, the Government was approached by 86 foreign mining companies in 1988; the foreign interest is likely to boost considerably Mozambique's mining exports in the near future. Guinea attracted French and United States groups for a joint-venture for developing iron ore. In Benin a wire and steel mill was set up in 1989, the first significant private investment since the country embarked on its liberalization policy. In Burkina Faso and Burundi, the cotton industry benefited from foreign support. In Niger and Mali, gold deposits are now planned to be exploited by foreign enterprises.

C. Diversification and structural adjustment policies

80. Government policies in most LDCs have gone through a phase of intensive restructuring during the 1980s. Foreign supported structural adjustment programmes have sought to restore macroeconomic equilibria, necessary after growing imbalances during the 1970s.

81. Diversification of the export structure, although a goal in most government programmes, was not the main goal of structural adjustment. However, structural adjustment programmes influence diversification in different, sometimes conflicting, ways. Firstly, general government policies can be expected to improve, thereby ameliorating the possibilities for diversification. Secondly, currency devaluation forms an important part of many structural adjustment programmes, so producer prices for agricultural and mineral products can be expected to increase. Thirdly, state enterprises are privatized (and thus potentially made more efficient) and private trade liberalized, creating opportunities for local and foreign entrepreneurs. Fourthly, in several structural adjustment programmes special incentives (export subsidies, the possibility to keep part of the foreign-exchange receipts of exports) are introduced. Fifthly, extra money is being made available by the international community, and it is to be hoped that foreign enterprises are possibly more willing to invest. On the other hand, government spending is cut back, including spending on programmes that might be beneficial for diversification (education, road maintenance, seed supply, etc.). Moreover, there is often a domestic credit squeeze, which makes it difficult for entrepreneurs to obtain investment or even working capital.

82. The short-term effects of structural adjustment programmes on diversification are likely to be negative. The main thrust of structural adjustment programmes is commonly to redirect resources to those activities which exhibit the strongest comparative advantage - and as noted in the

introduction, these are generally traditional export products. Not surprisingly, the traditional export sectors have received most attention in several structural adjustment programmes; tobacco estates in Malawi, for instance, or the cocoa sector in Sao Tome and Principe.

83. Diversification remains difficult, even with the extra foreign resources made available during a structural adjustment programme. Whether investment incentives are part of the adjustment package or not, foreign private investment remains hampered by the smallness and instability of the local market, by the continuing (sometimes even aggravated) lack of basic inputs and services, by the relatively high production and transport costs, and by the lingering memories of former LDC policies. Moreover, structural adjustment programmes have often not managed to really improve the overall economic situation of a country; high inflation and large debt servicing problems remain. In such an unbalanced, risky environment, it remains unattractive to set up new productive activities.

84. Slow diversification, however, is also partly linked to the formulation of structural adjustment programmes. One factor has already been mentioned: structural adjustment programmes often emphasize the traditional sector, even in countries where a high export concentration exists already. This can and does aggravate existing regional and social imbalances. A second factor is that structural adjustment programmes generally involve liberalization of trade - a process in which the whole price structure changes. Prices of inputs may, for instance, become prohibitively high, whereas no system is in place yet to supply farmers or traders with short-term campaign credits. A third factor is the already mentioned credit squeeze enforced by structural adjustment programmes. It might be preferable to introduce special credit facilities for small local entrepreneurs who wish to invest in export oriented production.

85. Basically, where diversification has taken place during a structural adjustment programme, this has been more the result of specific project aid than of the measures taken as part of the structural adjustment programme. Project aid normally increases when a country undertakes to adjust its economy, and some of the resulting projects can support the diversification of exports. In Sao Tome and Principe, for instance, an EEC project to develop palm oil production could reduce the country's dependence on cocoa. In Guinea, since the Government has started its structural adjustment programme, foreign donors are strongly interested in developing non traditional mineral resources like iron, gold and diamonds.

D. External factors affecting the viability of diversification efforts

86. Several external factors discourage LDCs from diversifying into non-traditional export commodities or into processed products. These include difficult and sometimes unexpectedly changing market access conditions, a segmented, differentiated and volatile world market demand, fast changing market requirements, and competition of other exporting countries.

87. Structural changes in world market demand can be the effect of increased competition by synthetic substitutes, or can result from an absolute falling of demand due to an economic crisis or new labour-saving production techniques. Since the 1960s, the five main fibers (jute, sisal, abaca, cotton and wool) have seen a considerable fall in demand due to the competition of synthetics, hurting, among others, the exports of Bangladesh and the United Republic of Tanzania. In the 1970s, technical progress also created

competition of synthetics for mineral ores, metals and diamonds. In the 1980s, beverages, timber, sugar and spices like cloves, ylang-ylang and vanilla (essential for the Comoros) also started meeting strong competition from substitutes. LDCs have hardly any means to compete with substitutes. For most products, their share in the world market is small, so they cannot influence prices and can hardly influence the product image; nor do they have the research funds to develop new uses for their traditional products.

88. Reduced demand as a result of an economic recession has hurt among others the export of high-quality groundnuts from Malawi and the export of livestock from Sudan to the Middle East. On the other hand, rising European demand for gum arabic has improved exports of this product by Chad and Sudan. Demand for cotton has somewhat improved in recent years, thanks to changed consumer preferences, enabling countries to expand their production.

89. Competition from other exporting countries with a higher productivity, better support services and more effective research and development is feared by several LDCs. Large developing countries like Brazil or Malaysia can afford to stimulate one type of vegetable oil at the cost of another because they produce several types; however, LDCs, having a far less diversified production structure, are not able to adapt their production to the resulting changes in demand. Even in basic industries, for instance aluminium, it is necessary to develop superior alloys to compete with substitutes - countries without the means to finance this are confronted with declining profit margins. If competitors raise their productivity, prices fall, and value added automatically falls for those producers who do not have the means to improve their productivity; this process has been strong, among others, for cocoa, eroding its profits in, for instance, Sao Tome and Principe.

90. Large financial resources are often necessary, not only for research and development, but also for the adoption of cost-reducing technological innovations, especially in minerals. It is but rarely that LDCs can gain access to such resources. A further factor: for many technological innovations, a certain institutional framework is necessary. It is partly for lack of such framework that the Green Revolution has largely bypassed Africa. It comes as no surprise that in these conditions many LDCs suffer from technological changes. For instance, the United Republic of Tanzania lost most of its European market share for hard fiber products to Brazil, which was able to introduce processing facilities whereas the United Republic of Tanzania was not.

91. LDCs also suffer competition from developed countries that are able to subsidize their otherwise non-competitive exports: for instance, the EEC subsidizes exports of wheat, rice, livestock products, vegetable oils and fats, and sugar. Subsidized wheat and rice exports to Senegal and Mauritania have made the export of coarse grains from Mali more difficult; and in western and southern Africa the sale of subsidized meat from the EEC constitutes a large threat to the traditional African meat and livestock exporters.

92. On the other hand, reduced competition can stimulate exports: the favourable development of the export of woollen carpets from Nepal, for instance, can be explained by the reduced supply of carpets from the Islamic Republic of Iran and Afghanistan. Intergovernmental programmes can also significantly influence market opportunities. Examples of these are guaranteed quotas for certain countries (the export of garments from Nepal has increased because Indian firms were induced to transfer part of their production facilities to this country, to profit from its export quota); preferences such as in the EEC-ACP Lomé Convention (the expansion of exports

to the EEC of clothing from Lesotho, Malawi, and the United Republic of Tanzania and that of green beans from Burkina Faso and Ethiopia has been made possible by these preferences); or ventures by the Council for Arab Economic Unity to promote, for instance, the export of dairy products, poultry, oilseeds, sugar and vegetables and fruits from Sudan to Arab countries.

93. Tariff and non-tariff barriers can be detrimental to exports of non-traditional commodities and processed products. Although LDCs and especially ACP-countries have many tariff and non-tariff preferences, in some categories their exports do meet with obstacles. For example, fruits and vegetables exported by several African LDCs face seasonal barriers in the EEC. Also, escalation in barriers with each stage of processing still exists in preference schemes, and frequently preferences are complicated by rules of origin schedules that are difficult for LDCs to comply with.

94. Restrictive business practices in the developed countries also limit the diversification potential of LDCs. The role of transnational corporations is very large in commodities such as tobacco, rubber, bauxite and iron ore, in which industries are also highly vertically integrated. Increased production or processing in these commodities can only attract investment from transnationals to the extent that the activity in question fits into their global corporate strategy. For products such as coffee, cocoa, tea and sugar, brand loyalties in the main market have given transnationals huge market power, which strongly reduces the scope for new exports or increased local processing for these products by an LDC, at least if this is not linked with a transnational company's investment.

95. Trade between LDCs (particularly in Africa) is hampered by numerous tariff and non-tariff barriers that are often impossible to surmount (local subsidies, disguised protection, absence of transport facilities, currency problems etc.). For instance, consumer subsidies on imported frozen meat in Egypt and the Libyan Arab Jamahiriya operate to the disadvantage of those African LDCs exporting live animals. Tariffs can be very high: for example, Ethiopia has a 100 per cent import tariff on tea.

96. If countries were willing to co-operate more intensively in regional groupings, however, intraregional trade could be strongly bolstered. But the problems are large. The colonial heritage includes a transport network that is tailored to trade contacts with non-African countries. Local political factors incite governments to give preferences only to those products which do not compete with local ones. Furthermore, with the recent deterioration in balances of payments, countries are tempted to reintroduce trade barriers. Sectoral agreements like the OCAM Sugar Agreement and the Economic Commission for Livestock and Meat (CEBV) in West Africa have met with little success. Burundi was induced to set up some industries by the creation of the Great Lakes Community, together with Zaire and Rwanda; now, however, these industries face serious marketing problems because these two other countries have decided to build up their own industries by protecting their national markets.

97. Some potential is present, however. Manufactures produced in Burkina Faso, Uganda and the Central African Republic could be directed towards accessible regional markets, considering the physical limitations for long-distance exports. In Lesotho, there is a potential for improving the export of quality meat to other Southern African countries. Niger and Sudan could also develop the export of processed meat (including canned and frozen meat) to their regional markets.

Table 1
Commodity dependence in the export earnings of LDCs
(1967/1971 - 1982/1986)

Number of countries Percentage of earnings accounted for by the 2 major commoditiesb/	Dependence on commodities for export earnings a/		
	Decreased dependence (A)	Unchanged or increased dependence (B)	Total
(1) Reduced percentage	10	3	13
(2) Same percentage	3	8	11
(3) Increased percentage	1	13	14
Total	14	24	38

Source: UNCTAD secretariat calculations

a/ Percentage of total export earnings accounted for by exports of all commodities, including fuels. A change in dependence greater than 10 per cent is considered significant.

b/ Percentage of total export earnings accounted for by two major commodity exports of a country

(A.1) Bangladesh, Gambia, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Nepal, Sao Tome and Principe, Tuvalu, Yemen

(A.2) Afghanistan, Benin, Burkina Faso

(A.3) Chad

(B.1) Guinea-Bissau, Sierra Leone, Sudan

(B.2) Burundi, Central African Republic, Maldives, Mauritania, Myanmar, Rwanda, Samoa, Togo

(B.3) Cape Verde, Comoros, Equatorial Guinea, Ethiopia, Guinea, Malawi, Mali, Mozambique, Niger, Somalia, United Republic of Tanzania, Uganda, Vanuatu

Table 2
Real growth of exports of manufactured products and of
commodity exports (values), 1970 to 1984/1985*

Export of commodities	Export of manufactured products	
	Growth	Decline
Growth	Afghanistan, Bangladesh, Burkina Faso, Central African Republic, Chad, Comoros, Lesotho, Maldives, Mali, Un. Rep. of Tanzania	Cape Verde, Lao P.D.R., Sierra Leone
Decline	Benin, Haiti, Nepal, Yemen	Equatorial Guinea, Mozambique, Sao Tome and Principe, Uganda

Source: UNCTAD secretariat calculations

*: or contiguous years

Note: only countries in which export of manufactured products made up at least 5 per cent of total manufactured exports in 1966-1970, or at least 10 per cent in 1985 are retained in this table, in order to avoid non-significant changes from a very low base level distorting the outcome. Diversification into services (tourism, export of electricity) is not included in this table.

Table 3
The development of the volume of commodity exports,^{a/}
1970-1972 to 1985-1987*

Secondary export commodities	One or two major export commodities	
	growth	decline
export of most secondary commodi- ties increased	Bangladesh Malawi, Nepal	Benin ^{b/} , Burkina Faso, The Gambia, Lao P.D.R., Kiribati, Mauritania, Niger, Samoa, Sudan
no consistent pattern	Myanmar, Rwanda, Sierra Leone	
export of most secondary commodi- ties declined	Burundi, Central African Republic, Chad, Comoros, Ethiopia, Guinea, Mali, Somalia, Un. Rep. of Tanzania, Togo, Vanuatu	Equatorial Guinea, Guinea- Bissau, Haiti, Mozambique, Sao Tome and Principe, Uganda, Yemen

Source: UNCTAD secretariat calculations

*: or contiguous years

a/ Taking into account the commodities as reported in the UNCTAD Commodity Yearbooks.

b/ Actually, Benin only shows a large growth of its petroleum exports, initially quite small, whereas all its other exports fell.

Table 4

The development of the range of commodities exported
and the concentration of commodity exports, in value terms, 1970-1985

country	number of commodities exported a/		concentration of commodity exports b/		share of two main commodities in total commodity exports (per cent)	
	1970	1985	1970	1985	1970	1987
<u>reduced concentration, increased range</u>						
Haiti	32	56	0.386	0.201	56	52
Nepal	6	38	0.597	0.253		50
Myanmar	17	49	0.499	0.341	76	58
Lao P.D.R.	7	25	0.454	0.345	98	61
Sudan	17	43	0.639	0.345	71	47
Sierra Leone	20	22	0.543	0.391	70	53
Samoa	11	13	0.506	0.433	78	54
Togo	16	22	0.482	0.461	69	63
The Gambia	4	14	0.594	0.520	55	87
Guinea Bissau	9	11	0.847	0.557	91	76
Burundi	11	13	0.826	0.776	91	75
<u>reduced concentration, equal or decreased range</u>						
Central African Republic	18	13	0.475	0.452	63	49
Chad	15	9	0.697	0.617	88	98
Mauritania	14	14	0.864	0.662	83	91
<u>increased concentration, equal or increased range</u>						
Un.Rep. of Tanzania	49	53	0.255	0.359	38	47
Afghanistan	18	44	0.307	0.432	42	52
Malawi	23	33	0.473	0.530	74	71
Burkina Faso	14	23	0.441	0.541	59	45
Yemen	7	32	0.563	0.663	72	28
Vanuatu	10	10	0.550	0.726	85	57
Niger	17	27	0.569	0.738	87	93
Somalia	16	18	0.574	0.760	68	70
Comoros	6	9	0.581	0.780	94	98
Rwanda	8	9	0.639	0.811	80	92
Kiribati	2	8	0.859	0.912	100	98
<u>increased concentration, reduced range</u>						
Mozambique	66	46	0.234	0.274	42	75
Benin	28	23	0.342	0.428	67	58
Cape Verde	13	9	0.493	0.568	80	95
Ethiopia	29	28	0.603	0.620	72	85
Sao Tome and Principe	17	14	0.627	0.698	95	80
Uganda	28	17	0.596	0.932	76	88

Source: UNCTAD Commodity Yearbook and UNCTAD secretariat calculations.

a/ Number of commodities exported at the three-digit SITC-level; only includes those products which are greater than US\$ 50,000 in 1970 or US\$ 100,000 in 1985, or more than 0.3 per cent of the country's total exports.

b/ Concentration as measured by the Hirschmann index, with '1' indicating maximum concentration of commodity exports.

Table 5
Main export commodities and their share in the total value of LDC exports, 1970 and 1987
(percentage)

	1987	1970	1987	1970	1987	1970
Afghanistan						
natural gas	16					
hides & leather	14					
raisins	13					
cotton	10					
Bangladesh						
jute products	31					
raw jute	30					
fisheries	11					
tea	1					
Benin						
palm kernel oil	20					
cocoa beans	20					
petroleum	18					
palm kernels	17					
Burkina Faso						
groundnuts	34					
cotton	22					
bovine cattle	15					
sheep and goats	14					
Burundi						
coffee	82					
cotton	8					
hides & leather	2					
Cape Verde						
fisheries	47					
bananas	23					
hides & leather	1					
Central African Republic						
diamonds	44					
coffee	22					
cotton	22					
wood	13					
Chad						
cotton	60					
bovine cattle	21					
meat	14					
Comoros						
spices	50					
copra	16					
coffee	2					
Equatorial Guinea						
cocoa beans	70					
coffee	8					
wood	6					
fisheries	3					
Ethiopia						
coffee	59					
hides & leather	8					
vegetables	5					
meat	2					
The Gambia						
groundnuts	36					
animal foodstuffs	14					
palm kernels	2					
Guinea						
alumina/aluminium	62					
bauxite	9					
fruits	8					
bauxite	5					
Guinea-Bissau						
groundnuts	40					
palm kernels	25					
cashew nuts	10					
hides & leather	9					
Haiti						
jute products	24					
fisheries	13					
leather	11					
raw jute	8					
Kiribati						
cotton	31					
petroleum	19					
cocoa beans	17					
palm kernels	3					
Lao P.D.R.						
cotton	43					
gold	15					
edible nuts	6					
bovine cattle	3					
Lesotho						
wool	69					
coffee	6					
cotton	5					
hides & leather	2					
Malawi						
fisheries	47					
bananas	23					
hides & leather	1					
Maldives						
diamonds	27					
coffee	12					
cotton	12					
Mali						
cotton	7					
Mauritania						
iron & steel	73					
sheep & goats	8					
vegetable materials	3					
Mozambique						
edible nuts	19					
cotton	16					
sugar	12					
petroleum	8					
Myanmar						
rice	51					
wood	23					
animal foodstuffs	9					
vegetables	7					
Nepal						
jute products	NA					
raw jute	NA					
bovine cattle	NA					
Niger						
bauxite	70					
alumina/aluminium	19					
coffee	2					
bauxite	1					
Rwanda						
coffee	69					
tin	8					
tungsten	7					
tea	6					
Samoa						
copra	16					
cocoa beans	2					
fruits	2					
vegetables	1					
Sao Tome and Principe						
cocoa beans	45					
copra	41					
palm kernels	46					
coffee	15					
Sierra Leone						
diamonds	66					
iron & steel	13					
palm kernels	8					
coffee	5					
Somalia						
sheep & goats	38					
bananas	28					
hides & leather	9					
bovine cattle	6					
Sudan						
cotton	62					
vegetable materials	9					
animal foodstuffs	5					
sheep & goats	2					
Togo						
cocoa beans	40					
phosphates	24					
coffee	17					
palm kernels	4					
Uganda						
coffee	51					
cotton	18					
tea	5					
animal foodstuffs	3					
United Republic of Tanzania						
coffee	17					
cotton	13					
hard fibers	11					
edible nuts	7					
Vanuatu						
copra	42					
fisheries	40					
wood	5					
cocoa beans	3					
Yemen						
coffee	50					
cotton	3					
vegetables	2					
Zambia						
uranium	77					
bovine cattle	17					
sheep & goats	3					
vegetables	2					

Source: UNCTAD Secretariat calculations
NA = data not available

Table 6

LDCs with a certain extent of vertical diversification in commodities

Countries	Areas of vertical diversification in commodities *
(to a significant extent)	
Nepal	Vegetable oils, butter, wheat flour, bakery products, shaped wood, macaroni, tobacco manufactures, fruit juices
Samoa	Vegetable oils, fruit preparations, beverages, cigarettes
Vanuatu	Meat preparations, shaped wood, vegetable oils, animal oil
Yemen	Cereal preparations, fruit preparations, sugar preparations, butter, meat preparations, non-alcoholic beverages, vegetable oils
(to a lesser extent)	
Guinea-Bissau	Shaped wood, vegetable oils, alcoholic beverages
Haiti	Cocoa powder, molasses, cereal preparations, meat preparations, fruit preparations, flour of wheat, alcoholic beverages, vegetable oils
Malawi	Preserved vegetables, refined sugar, vegetable oils, tobacco manufactures, fruit preparations, cereal flours, molasses, alcoholic beverages, shaped wood

* By decreasing order of export value in 1987, or latest year available
Source: UNCTAD secretariat calculations

Table 7
Cross tabulation of diversification experience with selected economic indicators

LDC's	population (millions)	surface (000 km ²)	income per capita (US\$, '80- '87)	growth rate of GDP/capita (% '80- '87)	growth of investment * (% '80- '87)	growth of agricultural production * (% '80- '87)	growth of manufactured production * (% '80- '87)	growth of exports * (% '80- '87)	commodity dependence ** '71- '86	structural adjustment programmes World Bank Sec- Struc- total tural ESAF
group A1										
Bangladesh	102.6	142	172	3	3	3	3	6	9	87
Gambia	0.8	11	221	3	3	1	3	12	4	86,89 86,88
Haiti	6.2	28	365	3	2	3	4	20	0	87
Kiribati	0.1	1	317	2	1	3	4	13	-6	1
Lao P.D.R.	3.8	237	179	2	3	3	4	19	-2	89
Lesotho	1.6	30	226	4	2	3	4	26	-5	88
Nepal	17.4	147	155	3	3	3	3	10	9	87 87
Sao Tome and Principe	0.1	1	352	3	1	2	3	12	-15	87
Tuvalu	0.0	0	336	4	4	4	4	17	-2	
Yemen	8.4	195	476	4	4	4	4			
group A2										
Afghanistan	15.3	652	250	3	4	3	3	21	-5	3
Benin	4.3	113	388	2	2	3	4	2	10	89 89
Burkina Faso	8.3	274	215	3	4	3	4	18	5	85
group A3										
Chad	5.3	1,284	185	2	3	3	2	14	8	88,89 87
group B1										
Guinea-Bissau	0.9	36	146	2	3	3	4	16	4	84 87,89 87
Sierra Leone	3.9	72	212	2	1	3	3	6	-3	84 86
Sudan	23.2	2,506	449	3	1	3	4	7	-3	83
group B2										
Burundi	5.0	28	251	3	2	3	4	17	9	86,88 86
Central Afr. Republic	2.7	623	397	2	2	3	3	13	1	87 86,88 87
Maldives	0.2	0	462	3	4	3	3	8	21	3 3
Mauritania	1.9	1,031	501	2	2	3	2	6	10	1 1
Myanmar	39.2	677	260	3	3	4	4	14	-12	1 1
Rwanda	6.6	26	320	3	2	4	4	21	2	1 1
Samoa	0.2	3	600	2	1	3	3	13	-1	1 1
Togo	3.2	57	390	3	2	4	2	21	-1	1 1
group B3										
Cape Verde	0.3	4	544	3	4	3	4	4	5	1 1
Comoros	0.5	2	432	1	3	3	4	13	-6	2 1
Eq. Guinea	0.4	28	383	3	3	3	3	-4	15	1 1
Ethiopia	44.8	1,224	120	2	2	3	3	13	0	1 1
Guinea	6.4	246	335	3	1	3	3	29	3	1 1
Malawi	7.7	118	161	3	2	4	3	16	1	1 1
Mal	8.6	1,240	228	3	3	4	3	21	5	83,88 81...87 88
Mozambique	14.5	799	104	1	1	2	2	2	-15	1 1
Niger	6.5	1,189	332	2	1	4	3	34	-8	85,87,89 87
Somalia	5.7	639	284	3	2	4	3	15	-8	87 86 86,88 87
Un. Rep. of Tanzania	23.9	945	147	2	2	3	4	8	-9	1 1
Uganda	16.7	241	229	1	2	3	1	5	1	86,88,89 87
Vanuatu	0.1	12	499	2	2	4	3	14	-7	83...89 87,89

Source: UNCTAD secretariat calculations

Table 8
Examples of domestic factors hindering diversification into non-traditional exports

Factors	drought	agricultural products	lack of financial resources	tourism	shortage of skilled manpower	insufficient producer prices for agricultural products	lack of support services
LDCs			minerals	fish	manufactures		
Afghanistan			several			manufacturing	
Bangladesh						agro-industry	
Benin						general	tea
Burkina Faso						general	general
Burundi						manufacturing	tobacco, beverages
Cape Verde						manufacturing	
Central African Republic						manufacturing	
Chad						general	
Comoros							
Equat. Guinea						cereals, oil seeds	
Ethiopia						fruits, vegetables	
The Gambia						several	
Guinea						pulses	cotton, oil seeds, meat, hides & skins
Guinea-Bissau						manufacturing	
Haiti						manufacturing	
Kiribati						manufacturing	
Lao P.D.R.						coffee, palm kernel	fish
Lesotho						livestock	sugar cane
Malawi						several	livestock, essential oils
Maldives						general	general
Mali						several	
Mauritania						cotton	
Mozambique						tourism	
Myanmar						manufacturing	
Nepal						fisheries	
Niger						manufacturing	
Rwanda						several	
Samoa						pulses	
Sao Tome and Principe						mining	
Sierra Leone						mining	
Somalia						cotton	
Sudan						manufacturing	
Togo							
Tuvalu							
Uganda							
U.R. of Tanzania							
Vanuatu							
Yemen							

Source: UNCTAD secretariat database

Footnotes

- 1/ TD/B/1078, 30 October 1986, para. 51
- 2/ A/CONF.147/2, 7 May 1990, paras. 41 and 46.
- 3/ See, for a further background discussion on problems in Africa, UNCTAD/EDM/ATF/1, chapter I.
- 4/ For Africa, cf. ibid., p. 27.
- 5/ TD/B/1078, 30 October 1986, para. 49(f).
- 6/ A/CONF.104/2/Rev.1, 1981, several references, paras. 21 to 58.
- 7/ Ibid., para. 57(c) and (e).
- 8/ This methodology is borrowed from the previous UNCTAD secretariat report, TD/B/C.1/AC/7, July 1989.
- 9/ In Bangladesh, for instance, production concentration (as measured by the Hirschman index) increased from 0.7 to 0.74 because of a growing importance of the production of sugar cane, whereas export concentration fell from 0.5 to 0.4. Relative diversification out of commodities as observed through export statistics may therefore overshadow a situation of growing concentration in the structure of production.
- 10/ This paper was written using statistics for the Arab Republic of Yemen, before its merger with Democratic Yemen into the Republic of Yemen. When in the text "Yemen" is mentioned, it refers only to the former Arab Republic of Yemen.
- 11/ UNCTAD secretariat, TD/B/C.1/AC/7.
- 12/ See, for instance, UNCTAD/EDM/ATF/1, p. 69: "there is a consensus on the crucial importance, for the future of the African commodity sector, of diversification into non-traditional exports".
- 13/ See the Contribution by the Office of the United Nations Disaster Relief Co-Ordinator (UNDRO) to the Second United Nations Conference on the Least Developed Countries. (A/CONF.147/PC/3/Add.14) March 1990.
- 14/ The examples in this chapter are only illustrative, and are not meant to be exhaustive.

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REPORT OF THE INTERGOVERNMENTAL GROUP OF EXPERTS
ON IRON ORE ON ITS FOURTH SESSION

held at the Palais des Nations, Geneva
from 22 to 24 October 1990

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INTRODUCTION

1. The fourth session of the Intergovernmental Group of Experts on Iron Ore was held at the Palais des Nations, Geneva, from 22 to 24 October 1990.

2. In the course of the session, the Expert Group held two plenary meetings. At its 10th (opening) meeting on 22 October, it decided to pursue its discussions on agenda items 3, 4, 5 and 6 in informal meetings. It was agreed that a summary of the informal discussions for inclusion in the report would be presented by the Chairman at the closing plenary meeting. (For the summary see chapter I below.)

3. In his introductory statement, the Deputy Secretary-General of UNCTAD, in welcoming delegates, made particular reference to the presence of consultants from the business sector. UNCTAD's work on iron ore had been furthered by the endorsement by the Trade and Development Board in its decision 382 (XXXVI) of the recommendation made by the Group at its third session, that "UNCTAD's work on iron ore should be maintained and that regular intergovernmental meetings of experts should be convened, with the participation of industry advisers, to exchange views on the iron ore situation and to review and enhance iron ore statistics". The decision reflected the need for continuing and strengthening international co-operation on iron ore. It was also an expression of confidence in UNCTAD as a viable framework for producer-consumer dialogue which addressed the needs of the international iron ore community. In the light of this decision, the Intergovernmental Group could now devote itself to discussions of three technical aspects: (i) enhancement of market transparency through a review of statistics; (ii) an open exchange of views on the current market situation and future outlook, including questions of finance, production capacity, trade flows, transport and changes in demand; (iii) keeping informed about the relevant studies of other international institutions and individual countries.

4. Confidence in the iron ore industry had grown as world production, consumption and trade had reached record high levels in 1989 and the first half of 1990. This recovery had helped improve prices and should stimulate investment projects. However, there was uncertainty whether the recovery could be sustained in the face of projected lower world economic growth rates. World crude steel production had pushed iron ore production to an all-time high of 976.5 million tons in 1989, 2 per cent higher than in 1988, the previous record year. This positive development had provoked temporary shortages for some types of ore, revealing the vulnerability of the iron ore market to demand shifts. It was thus in the long-term interest of both producers and consumers to hold regular consultations assessing the supply and demand perspectives with a view to achieving a better balance.

5. He went on to emphasize that co-operation between governments, industries and international organizations was closer than ever; their valuable input had greatly enhanced the background documentation for the current meeting. The

expanding network of statistical correspondents providing iron ore statistics now covered 70 countries. Studies for the annotated bibliography had been provided by 17 international organizations and 11 governments.

6. Initiatives taken by the secretariat to assure a fruitful outcome of the three-day meeting included, firstly, careful preparation of the organization of work and, secondly, inviting an eminent personality from the iron and steel industry to share his views on future trends in iron ore demand. Thirdly, specific governments had been encouraged to inform the Group about the iron ore industry in their countries. Fourthly, tables for completion would be distributed immediately so that delegates could indicate their governments' estimates of iron and steel production and iron ore trade prospects for 1990 and 1991.

7. The Chairman, in his introductory remarks, emphasized the importance of international co-operation for dealing with questions of supply and demand. Exchanges of information on commodity markets were especially important in view of imbalances resulting from falling prices that were detrimental for developing countries dependent on exports for their economic and social progress. He cautioned that market transparency alone could not resolve all the problems but that it would help solve certain specific problems.

Chapter I

REVIEW OF IRON ORE STATISTICS (agenda item 3)

REVIEW OF THE CURRENT SITUATION AND OUTLOOK FOR IRON ORE (agenda item 4)

BIBLIOGRAPHY OF RELEVANT STUDIES ON IRON ORE (agenda item 5)

PREPARATIONS FOR THE FIFTH SESSION OF THE INTERGOVERNMENTAL GROUP OF EXPERTS ON IRON ORE (agenda item 6)

OTHER BUSINESS (agenda item 7)

A. Review of iron ore statistics (agenda item 3)

(a) Review of the document "Iron Ore Statistics 1980-1989" (TD/B/C.1/IRON ORE/3)

8. The UNCTAD secretariat presented this document containing 26 tables with updated, detailed statistics. The compilation of the statistics was primarily based on the replies to the UNCTAD questionnaire on iron ore (TDO 254/3 (12-2)). A total of 50 countries accounting for virtually all production, consumption and trade in iron ore have currently been providing timely iron ore statistics directly to the UNCTAD secretariat. In order to improve the quality and coverage of the UNCTAD iron ore statistics, new tables were included in the above-mentioned document covering world exports in Fe content for the period 1980-1989, as well as iron ore imports for 1989 into the EEC, Japan and Eastern European countries, with breakdowns by origin and destination as well as by agglomerated and non-agglomerated ores. These new statistical tables would supplement the universal coverage of traditional statistics of total volume and value of iron ore imports and exports, the network of exports by major region of destination, and the exports of pellets, and together provide a comprehensive picture of world iron ore trade by origin and destination in 1989.

9. Recalling that more detailed and disaggregated information by product types had also been provided for the document, the secretariat expressed its appreciation to those statistical correspondents who were so effectively providing information to fill existing gaps and to improve market transparency through the compilation of original statistics. Continuous efforts were being made to use uniform criteria, definitions and sources, for the production of comparable statistics essential for the purpose of economic analysis.

10. In reviewing the document, a number of participants expressed their appreciation for the quality of statistics provided by the secretariat in terms of coverage, timeliness and accuracy. The Intergovernmental Group agreed to include in the document definitions and footnotes which appear in the UNCTAD questionnaire (TDO 254/3 (12-2)) in order to aid in understanding the statistics and facilitate reading. The iron ore questionnaire was also reviewed and a few modifications were suggested for its completion.

11. Revisions and up-to-date statistics were provided by participants for inclusion in the revised version of the document distributed in the course of the session. The importance of receiving accurate and timely data was highlighted by a number of participants.

(b) System of national statistical correspondents for the provision of statistical data on iron ore to the secretariat

12. On this item, the secretariat informed the Intergovernmental Group that 70 countries had designated national focal points for the provision of iron ore statistics. This encouraging step had greatly facilitated the work of the secretariat in this area. Now the secretariat would be able to receive and check statistics even from countries not participating in the work of the Intergovernmental Group. Governments were invited to update the list in the course of the session.

(c) Year-to-date statistics and estimates for 1990 and 1991

13. With a view to assisting the Group to assess the year-to-date situation and possible trends for the following year, the secretariat had distributed to each delegation a mini-questionnaire in order to collect the latest available data and/or estimates of key statistics for the current and following year. The compilation of estimates for 1990 and forecasts for 1991, as well as statistics available at the UNCTAD secretariat for the current year, was made available to participants at the session as an informal document called "Latest available statistics provided by delegates during the session and available at the UNCTAD secretariat".

14. It was agreed that a mini-questionnaire should be sent to focal points with a view to gathering key information for rapid and regular dissemination. It should contain information on production of iron ore, metallics and crude steel, as well as imports and exports of iron ore.

(d) Proposal by Canada

15. The representative of Canada, recalling the proposal submitted by his delegation (TD/B/C.1/IRON ORE/L.1), proposed that in order to improve the quality, coverage and timeliness of statistics on iron ore the Intergovernmental Group of Experts organize within its activities working sessions devoted to reviewing and enhancing the statistics prepared by the UNCTAD secretariat. These sessions would precede the regular meetings of the Intergovernmental Group of Experts.

16. An extensive exchange of views took place regarding the proposal. The Chairman concluded that there was broad agreement among experts that further time was needed to consider the proposal and that it should be taken up again at the Group's next session.

B. Review of the current situation and outlook for iron ore (agenda item 4)

17. The UNCTAD secretariat presented the document describing market developments in 1989 and the first half of 1990 (TD/B/C.1/IRON ORE/2). An overview of the achievements and problems faced by the iron ore industry in the 1980s was also given. In addition, the secretariat presented views on the

outlook for the iron ore market for the rest of 1990 and for 1991, which took into account the increasing economic and political uncertainties. The Intergovernmental Group took note of recent developments in some producing countries including: planned new mining projects; technical achievements to increase mining efficiency and upgrade ores; prospects for the iron ore industry. The Group also noted that world iron ore production and consumption had reached record levels in 1989. During the first half of 1990, iron ore demand had remained high, although less strong than in 1989 - a situation which was expected to continue throughout the year. The supply/demand balance for iron ore was tighter in 1990, owing to some disruptions in supply caused by, *inter alia*, strikes, technical and/or transportation problems and, in particular, the interruption of deliveries from Liberia. The question of new investments, particularly for new projects, and their financing requirements was also addressed by the Intergovernmental Group.

18. In reviewing the market situation in the light of the secretariat's report on the current situation and outlook, the interventions focused exclusively on the supply side. In this context, presentations were given by the representatives of Guinea and Senegal on new iron ore projects in their countries. Developments in the iron ore industry in Australia, Canada, Sweden, the United States and the Union of Soviet Socialist Republics were also described. At the invitation of the UNCTAD secretariat, Mr. D.F. Anderson, Director of Economic Affairs for the International Iron and Steel Institute, made a detailed analysis of past and future supply and demand prospects.

19. For 1991, the situation was expected to be weaker. In addition to predicted lower economic growth rates, factors such as the volatility of oil prices, high interest rates, and the instability of financial markets would push inflation rates up, accentuating recessionary tendencies. This would affect the consumption of durables and capital equipment which, in turn, implied a decline of steel consumption, and hence of iron ore demand. However, iron ore prices were expected to hold firm given the current tight demand/supply balance. Investments in the iron ore industry could well be inhibited in the short term because of uncertainties regarding the general economic situation.

C. Bibliography of relevant studies on iron ore (agenda item 5)

Review of the document "Annotated bibliography on iron ore" - 1990
(TD/B/C.1/IRON ORE/4)

20. In response to the wish of the Intergovernmental Group that the "Annotated bibliography on iron ore", submitted in 1989, should be regularly updated and maintained as a regular item on its agenda, the UNCTAD secretariat had prepared a supplement document.

21. The Intergovernmental Group expressed satisfaction with the bibliography prepared by the secretariat and requested that this exercise be continued.

22. An account of current activities and studies was made by the representatives of the Economic Commission for Africa (ECA), International Labour Organisation (ILO), General Agreement on Tariffs and Trade (GATT) and International Iron and Steel Institute (IISI). The Intergovernmental Group

was also informed about a recent seminar on direct reduction organized by the Latin American Iron and Steel Institute (ILAFA), as well as the forthcoming symposium on new smelting processes, to be held in the Libyan Arab Jamahiriya at the end of 1990 under the auspices of the Arab Iron and Steel Union.

D. Preparations for the fifth session of the Intergovernmental Group of Experts on Iron Ore (agenda item 6)

23. The Intergovernmental Group agreed on the following substantive items for inclusion in the provisional agenda for the fifth session of the Group:

- Review of iron ore statistics;
- Review of the current iron ore situation and outlook for iron ore;
- Annotated bibliography on iron ore - 1991.

24. The Intergovernmental Group proposed that the three-day session should be held, if possible in September/October 1991.

E. Other business (agenda item 7)

25. There were no points raised for discussion under this agenda item.

Chapter II

STATEMENTS MADE AT THE CLOSING MEETING ON 24 OCTOBER 1990

26. The representative of Australia recalled that at the previous session his delegation had some reservations about supporting the continuation of the Group but had expressed the hope that this session would provide an opportunity for positive dialogue between producers and consumers of iron ore, including participation of industry representatives. Closer scrutiny of the iron ore market and meaningful industry input would, he believed, improve the Group's usefulness. The secretariat's efforts to prepare improved documents for the session, especially the review of iron ore statistics, were particularly appreciated. Timely collection and dissemination of detailed, high-quality statistics on iron ore would facilitate market transparency. Such statistics were a prerequisite to successful business management and government decisions. They would also serve as a more reliable basis for the secretariat's analytical work and for the further development of the Group as a forum for positive producer/consumer dialogue. Canada's efforts to this end were appreciated.

27. The presentation on future trends in iron ore demand, by the representative of the International Iron and Steel Institute, had been very useful. Likewise, the Australian delegation had been very interested in the presentations on iron ore developments, by the representatives of Guinea and Senegal, and the contributions from four other countries to the review of the current situation and outlook for the international market in iron ore. He was again disappointed, however, at the absence of contributions from consumer countries to the market review. Clearly a more active commitment by consumer countries was necessary to improve the Group's usefulness to all countries interested in iron ore.

28. The representative of Canada said that his country wished to be associated with the statement made by the representative of Australia. He then went on to thank all the delegations which had helped to refine Canada's proposal.

29. The representative of Peru expressed satisfaction with the results achieved. She referred particularly to the active participation of experts from industry and the high quality of the statistical and analytical work done by the secretariat. Improvements in the work of the Intergovernmental Group would always be welcomed and she was confident that this objective could be achieved in future sessions, with the good will of all members.

Chapter III

ORGANIZATIONAL MATTERS

A. Opening of the session

30. The fourth session of the Intergovernmental Group of Experts on Iron Ore was opened on 22 October 1990 by the incumbent Chairman, Mrs. Concepción Suárez de Fuchs (Venezuela).

B. Election of officers (agenda item 1)

31. At its 10th (opening) meeting, on 22 October 1990, the Intergovernmental Group elected Mr. Henri Nolard (Belgium) as Chairman and Mr. Paul Lafleur (Canada) as Vice-Chairman-cum-Rapporteur.

C. Adoption of the agenda (agenda item 2)

32. The Group then adopted the provisional agenda for its fourth session (TD/B/C.1/IRON ORE/1), as follows:

1. Election of officers
2. Adoption of the agenda and organization of work
3. Review of iron ore statistics
4. Review of the current situation and outlook for iron ore
5. Bibliography of relevant studies on iron ore
6. Preparations for the fifth session of the Intergovernmental Group of Experts on Iron Ore
7. Other business
8. Adoption of the report of the Intergovernmental Group of Experts on Iron Ore to the Committee on Commodities.

D. Membership and attendance */

33. The following States members of UNCTAD were represented at the session: Algeria; Australia; Austria; Belgium; Bolivia; Brazil; Canada; Chile; France; Germany; Greece; Guinea; Hungary; India; Iran (Islamic Republic of); Italy; Kuwait; Mexico; Morocco; Netherlands; Nigeria; Norway; Peru; Philippines; Poland; Portugal; Republic of Korea; Senegal; Spain; Sweden; Switzerland; Thailand; Turkey; Union of Soviet Socialist Republics; United States of America; Venezuela.

*/ For the list of participants, see TD/B/C.1/IRON ORE/INF.1.

34. The following other State member of UNCTAD attended as observer: Japan.
35. The Economic Commission for Europe and the Economic Commission for Africa were represented at the session.
36. The following specialized agencies were represented at the session: International Labour Organisation; International Monetary Fund; General Agreement on Tariffs and Trade.
37. The following intergovernmental organizations were represented at the session: Association of Iron Ore Exporting Countries; European Economic Community; League of Arab States.
38. A representative of the International Iron and Steel Institute, a non-governmental organization which has consultative status with the Economic and Social Council, attended the session at the special invitation of the UNCTAD secretariat.
- E. Adoption of the report of the Intergovernmental Group of Experts to the Committee on Commodities (agenda item 8)
39. At its 11th (closing) meeting on 24 October 1990, the Intergovernmental Group of Experts adopted its draft report (TD/B/C.1/IRON ORE/L.2 and L.3), with some amendments, and authorized the Rapporteur to complete the final version as appropriate.
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Fourteenth session
12 November 1990

REPORT OF THE INTERGOVERNMENTAL GROUP OF EXPERTS
ON IRON ORE ON ITS FOURTH SESSION

held at the Palais des Nations, Geneva
from 22 to 24 October 1990

Corrigendum

Cover page

The identifying symbols of the report should read as follows:

TD/B/C.1/313
TD/B/C.1/IRON ORE/5